



**PATENT**

**IN THE UNITED STATES PATENT & TRADEMARK OFFICE**

Applicant: Spicer et al. : Paper No:  
Serial No. 09/990,552 : Group Art Unit: 1615  
Filed: November 21, 2001 : Examiner: Qazi  
For: Cubic Liquid Crystalline Compositions and Methods for Their Preparation

**RESPONSE TO ELECTION REQUIREMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

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PATENT & TRADEMARK OFFICE

Dear Sir:

In response to the Office Action, dated November 4, 2003, setting forth an election requirement in the above patent application, the time for response being extended for one month, please consider the following remarks.

In the Office Action, the Examiner has requested that the Applicants elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. The Examiner has stated that at least some of the species are listed in claims " 3, 6, 6 (*sic*) 10, 11, 14, 16, 17, and 18-21." It is unclear as to whether the Examiner intended to include claim 8 or claim 9. As such, arguments *against* elections for these claims and also, if necessary, election of species for claims 8 and 9 is given.

The claims in this application are directed to a cubic gel composition comprising (A) an encapsulating compound, (B) an amphiphile, and (C) a solvent, and optionally (D) a hydrotrope and (E) an active ingredient. The Examiner appears to be requesting that the Applicants elect a single disclosed species for each of these

components of the cubic gel composition (although that is somewhat unclear). Applicants respectfully traverse this election requirement for the following reasons.

As an initial matter, there have already been two related applications that have been allowed with claims of similar breadth defining possible amphiphiles, solvents, and hydrotropes (see U.S. applications 09/789,883 and 10/056,346). No election of species was required for either of these. Thus, for these related cases, a search of the generic claims was neither unduly extensive nor burdensome on the Examiner.

In addition, the invention as recited in independent claim 1, centers upon the encapsulating agent, the amphiphile and the solvent. A prior art search for these three components would be the focus for patentability issues. The patentability of this invention (as defined by claim 1) is not dependent upon the hydrotrope (D) or active ingredient (E), which are optional components and as such, recited in dependent claims 6 and 14-17, respectively. Thus, at the very least, the election of species requirement as to the hydrotrope (D) and active ingredient (E) (claims 6 and 14-17) should be withdrawn.

Further, MPEP §803.02 states that if members of a Markush group are sufficiently few in number or so closely related that a search of the entire claim can be made without serious burden, the Examiner must examine all members of the Markush group in the claim on the merits even though they are directed to independent and distinct inventions. Claim 3 recites a Markush group of only three encapsulating compounds. Similarly, claim 8 recites a Markush group of only four amphiphiles, claim 9 recites only two types of monoglycerides as amphiphiles, and claim 11 recites a Markush group of only five related (by polarity) solvents. Therefore, the Examiner's election requirement as to these claims is improper and should be withdrawn.

Accordingly, withdrawal of this election requirement is requested and issuance of an office action covering claims 1-21 of the present application is earnestly requested.

If this election of species is maintained by the Examiner, the Applicants elect the following species:

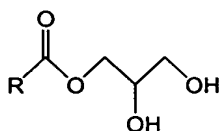
Claim 1 is generic and recites three components: (A) an encapsulating compound; (B) an amphiphile; and (C) a solvent.

Claim 3 recites that the encapsulating compound (A) is selected from the group consisting of starch, cyclodextrin, dextran, and combinations thereof. From this group, the Applicants elect dextran. Claims 1-21 read on this species.

Claim 6 recites that the hydrotrope (D) is selected from the group consisting of low molecular weight alcohols; polyols; alcohol ethoxylates; surfactants derived from mono- and poly-saccharides; copolymers of ethylene oxide and propylene oxide; fatty acid ethoxylates; sorbitan derivatives; sodium butyrate; Poloxamer 407; Polyethylene glycol 400; dimethyl sulfoxide; sodium toluene sulfonate; nicotinamide; procaine hydrogen chloride and the ethoxylated derivatives thereof; ethylene glycol, sodium alkanoates, sodium alkane sulfonates, Resorcinol, Pyrogallol, PABA hydrogen chloride, sodium p-bromobenzene sulfonate, isonicotinic acid, sodium 4-picolinate, sodium 3-hydroxy-2-naphthlate, Sodium xylene sulfonate, sodium cinnamate, sodium benzene disulfonate, sodium p-toluenesulfonate, sodium salicylate, sodium benzene sulfonate, sodium benzoate, sodium cumene sulfonate, propylene glycol, glycerol, and polyglyceryl esters, caffeine, sodium butyrate; and combinations thereof. From this group, the Applicants elect low molecular weight alcohols. Claims 1-4 and 6-21 read on this species.

Claim 8 recites that the amphiphile (B) is selected from the group consisting of 3,7,11,15-tetramethyl-1,2,3-hexadecanetriol, phytantriol, N-2-alkoxycarbonyl derivatives of N-methylglucamine, unsaturated fatty acid monoglycerides, and combinations thereof. From this group, the Applicants elect phytantriol. Claims 1-21 read on this species.

Claim 9 recites that the amphiphile (B) is a monoglyceride having the formula:



wherein R is selected from the group consisting of monovalent hydrocarbon groups of 6 to 22 carbon atoms, and monovalent halogenated hydrocarbon groups of 6 to 22 carbon atoms. From this group, the Applicants elect the monoglyceride having the wherein R is selected from the group consisting of monovalent hydrocarbon groups of 6 to 22 carbon atoms. Claims 1-21 read on this species.

Claim 10 recites that the amphiphile (B) is selected from the group consisting of glycerol monooleate, glycerol monostearate, monolinolein, ethoxylated alcohol surfactants, and combinations thereof. From this group, the Applicants elect monolinolein. Claims 1-21 read on this species.

Claim 11 recites that the solvent (C) is selected from the group consisting of water, glycerol, glycols, formamides, ethylammonium nitrate, and combinations thereof. From this group, the Applicants elect water. Claims 1-11 and 13-21 read on this species.

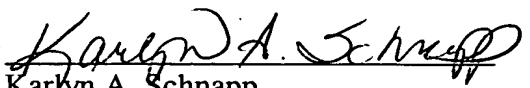
Claim 14 recites that the active ingredient (E) is selected from the group consisting of proteins, amino acids, vitamins, anti-cancer drugs, lung surfactant, omega-3 fatty acids, ethyl oleate, monolinoleic acid, caffeine, ephedrine, ketoprofen,

metronidazole, acetyl salicylic acid, clotrimazole, vitamin E, insulin, lidocaine, hydrochloride, nitroglycerin, prilocaine, tetracycline hydrochloride, Benzylpenicillin, acyclovir, guaifenesin, melatonin, metronidazole, phenylpropanolamine, pseudophedrine hydrochloride, timolol maleate, acyclovir, hydrocortisone, minoxidil, sildenafil citrate, eflomithine HCl, zinc pyrithione, niacinamide, flavor oils, antibiotics, vitamins, fatty acids, tracer materials for diagnostic tests, pesticides, organophosphates, non-organophosphates, herbicides, and combinations thereof. From this group, the Applicants elect proteins. Claims 1-14 and 18-21 read on this species.

The Examiner has indicated an election of species is required for claims 18-21. Claims 18-21 do not contain listings of the species as in earlier claims and as such, the Examiner's election requirement directed to these claims is improper. However, since these claims reference an encapsulating compound, an amphiphile, a solvent (claim 18), a hydrotrope (claim 19), and an active ingredient (claim 21), if necessary, the Applicants' previous species elections for these components is maintained for these claims as well.

Respectfully submitted,

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Serial No. 09/990,552

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to The Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, this 5th day of December, 2003.

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A handwritten signature in cursive script, appearing to read "Karen S. Kung'uzi".

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